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Date: February 28, 2015

To: Florigna Feliciano, Caltrans District 3 Division of Planning and Local Assistance

From: Bill McCullough, System Metrics Group, Inc. (SMG)

### **Subject: Ad Hoc Paper on Permit Load Analysis**

This paper discusses the approach used to identify the number of permit loads that travel over or under structures on the State Highway System (SHS) in District 3. The number of permit loads was used to identify and prioritize structures that may have truck permit load deficiencies as part of the Caltrans District 3 Goods Movement Study.

This assessment was a high-level origin-destination (OD) analysis for permit weight and height loads. A more detailed assessment using traffic modeling was not performed given resource constraints for this project. However, the general approach identified in this paper can be refined using more sophisticated tools and techniques should Caltrans desire to expand the analysis.

The primary data source used for the assessment was the Caltrans Permit Branch statewide *Extra-Legal Single Permit Load Database*. An extra-legal permit is required from Caltrans for a vehicle that carries a non-reducible load that exceeds the legal limit in width, height or weight. Appendix A at the end of this memorandum shows the legal limits for truck lengths.<sup>1</sup> The database contains information on 104,757 permits issued in California between June 2013 and May 2014. A sample from the database is shown in Exhibit 1 and contains the following field elements:

- Origin and Destination City or Place (some records had street addresses)
- Vehicle width in feet
- Loaded width in feet
- Combined vehicle length in feet
- Loaded Height from pavement in feet
- Maximum weight distribution
- Number of tires by axle
- Issue Date for the Permit

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<sup>1</sup> More information on legal truck access limits and permits can be found at:  
<http://www.dot.ca.gov/hq/traffops/engineering/trucks/>.

## Exhibit 1: Extra-Legal Single Permit Load Database

A1		fx	Origin																				
1	Origin	Destination	VehWidth	LoadedWidth	CombVehLength	LoadedHeight	MaxWeight					Tires1	Tires2	Tires3	Tires4	Tires5	Tires6	Tires7	Tires8	Tires9	Tires10	Tires11	IssueDate
2	CHICO CA	SACRAMENTO CA	132	167	1283	188	22000 46725	60000	60000	60000		2	4	4	8	8	8	8	8	8			2/4/2014
3	ESCALON CA	SACRAMENTO CA	132	167	1283	188	22000 46725	60000	60000	60000		2	4	4	8	8	8	8	8	8			1/16/2014
4	FRESNO CA	SACRAMENTO CA	124	143	942	173	22000 46725	60000				2	4	4	8	8							9/7/2013
5	RIO VISTA CA	SACRAMENTO CA	120	143	780	168	22000 46725	60000				2	4	4	8	8							3/25/2014
6	STOCKTON CA	SACRAMENTO CA	120	180	1247	184	22000 46725	60000	46725	46725		2	4	4	8	8	4	4	4	4			3/21/2014
7	WALNUT CREEK CA CA	SACRAMENTO CA	120	144	984	187	22000 46725	58400	60000			2	4	4	8	8	8	8					5/28/2014
8	NV LINE 80	SACRAMENTO CA	102	116	900	168	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																9/25/2013
9	SUNNYVALE	SACRAMENTO 27	120	156	1320	173	20000 40495	52000	52000	52000		2	4	4	8	8	8	8	8	8			4/29/2014
10	Sacramento Hwy 16 & Sunrise Bl	Sacramento Hwy 16 & Florin Perkins f	120	126	1218	168	20,000 40,495 40,495 40,495					2	4	4	4	4	4	4	4	4	4		3/19/2014
11	Redding Hwy 299 & Crystal Creek Rd	Sacramento I 5 & Florin Rd	96	120	780	168	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																4/30/2014
12	Sacramento Hwy 16 & Florin Perkins	Sacramento I 80 & Winters St	120	126	1218	168	14,000 40,495 40,495 40,495					2	4	4	4	4	4	4	4	4	4		8/30/2013
13	Sacramento Hwy 16 & Florin Perkins	Sacramento I 80 & Winters St	120	126	1218	168	14,000 40,495 40,495 40,495					2	4	4	4	4	4	4	4	4	4		8/29/2013
14	SACRAMENTO/ 2828 EL CENTRO RD	SACRAMENTO/6200 FRANKLIN BLVD	102	102	900	168	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																6/2/2014
15	MADERA	SACRAMENTO	102	144	900	162	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																9/17/2013
16	BAKERSFIELD CA	SACRAMENTO,CA	120	108	756	174	12,000 40,495 48,139					2	4	4	8	8							4/10/2014
17	BAKERSFIELD CA	SACRAMENTO,CA	120	108	756	180	12,000 40,495 48,139					2	4	4	8	8							4/10/2014
18	METTLER, CA	SACRAMENTO,CA	102	108	756	180	12,000 40,495 48,139					2	4	4	8	8							4/10/2014
19	RICHMOND, CA	SACRAMENTO, CA	120	148	1320	178	22000 46550 58406 60000 46725					2	4	4	8	8	8	8	4	4	4		12/26/2013
20	SEBASTOPOL, CA	SACRAMENTO,CA	102	128	780	186	20000 40343 40571					2	4	4	4	4							2/19/2014
21	AZ LINE I-10	SACRAMENTO	180	180	1200	185	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																3/20/2014
22	AZ-I-10	SACRAMENTO	102	102	900	168	12350 46550 46725					2	4	4	4	4							4/16/2014
23	AZ LINE 10	SACRAMENTO	102	125	864	162	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																9/7/2013
24	AZ LINE 10	SACRAMENTO	102	142	900	163	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																6/18/2013
25	AZ LINE 10	SACRAMENTO	102	102	960	168	20,000 46,725 40,000					2	4	4	4	4							5/13/2014
26	AZ LINE 10	SACRAMENTO	102	102	960	168	20,000 46,725 40,000					2	4	4	4	4							5/13/2014
27	AZ LINE 10	SACRAMENTO	102	115	900	168	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																5/9/2014
28	AZ LINE 10	SACRAMENTO	102	126	900	168	ALL AXLES LEGAL - GROSS NOT TO EXCEED 80,000 LBS. PER CVC 35551																3/11/2014

The database required significant manipulation to perform the analysis, which was done in four general steps:

- Clean up and match OD pairs that start, end, or pass-through District 3
- Identify potential routes for the trips between the OD pairs at the county and state highway  
[https://www.census.gov/geo/maps-data/data/cbf/cbf\\_place.html](https://www.census.gov/geo/maps-data/data/cbf/cbf_place.html)
- Sum the total permit loads for each county and route
- Link the permit loads to specific structures

The details for each step are summarized in the following sections.

### Match OD Pairs

To protect the privacy of permit recipients, the database was provided with city (or community) pairs as the primary level of OD aggregation. Origins or destinations outside of California were represented at the state line (e.g., “OREGON STATE LINE”). Some records also were represented by more community or more general place names for areas outside of designated cities or towns (e.g., “BROWNS VALLEY”).

The first step in the process was to make OD names consistent. There were many records that contained misspellings or inconsistent naming (e.g., “ARIZONA STATE LINE” vs. “ARIZONA LINE” or “CITY OF SACRAMENTO” vs. “SACRAMENTO”), which were manually corrected for as many cases as possible.

To facilitate this process the origins and destinations were cleaned up separately. First, the origins were summarized by using the Microsoft Excel “Pivot Table” feature to count the origins to identify major origins in the state and District. This allowed the team to identify the most common origins in the state and District to be able to focus on these highest demand pairs. Another tool that was used to identify District 3 locations was to use a U.S. Census Bureau Incorporated database of “Places and Census Designated Places”<sup>2</sup> that can be readily obtained from the internet. This allowed the team to use the

<sup>2</sup> [https://www.census.gov/geo/maps-data/data/cbf/cbf\\_place.html](https://www.census.gov/geo/maps-data/data/cbf/cbf_place.html)

Excel “LOOKUP” features to link city and place descriptions to counties in District 3 so that efforts could be focused on those trips that most impact the District.

Using these tools and methods in an iterative process, various data sorts and key word searches were performed to make origin names more consistent and to correct errors. This process was repeated for destinations.

Once the origins and destinations were cleaned. The pairs were evaluated to identify the most common OD pairs that impact the district. Another pass at cleaning up the data was done using the most common ODs. This helped to ensure that the most common locations were represented in the analysis since not every OD pair could be cleaned up or matched.

In time, after working with the data, the team was able to visually identify OD pairs that likely impact the District. This was particularly true for through trips. For example, any trip crossing the Nevada State line was immediately flagged for review since many trips to Nevada traverse the district. Likewise for trips that have an origin or destination in Oregon. Though some trips may travel from Oregon to Shasta County in District 2, most trips either end in the District or pass through the District.

Using this iterative - and mostly manual - process, the study team was able to match 90,962 permit loads throughout the state, representing approximately 87% of all loads in the state. Of those, the study team identified 14,689 permit loads between 3,986 ODs that originate, end, or pass-through District 3. Exhibit 2 summarizes the results for the top OD pairs in the District.

As shown in the table, 25 percent of all permit loads were pass-through loads in a north-south direction through the District with the vast majority of them along I-5 based on the Google Maps shortest travel time path estimate. Trucks could be traveling on other State Routes through the District, but I-5 would be the most logical route choice for most truckers.

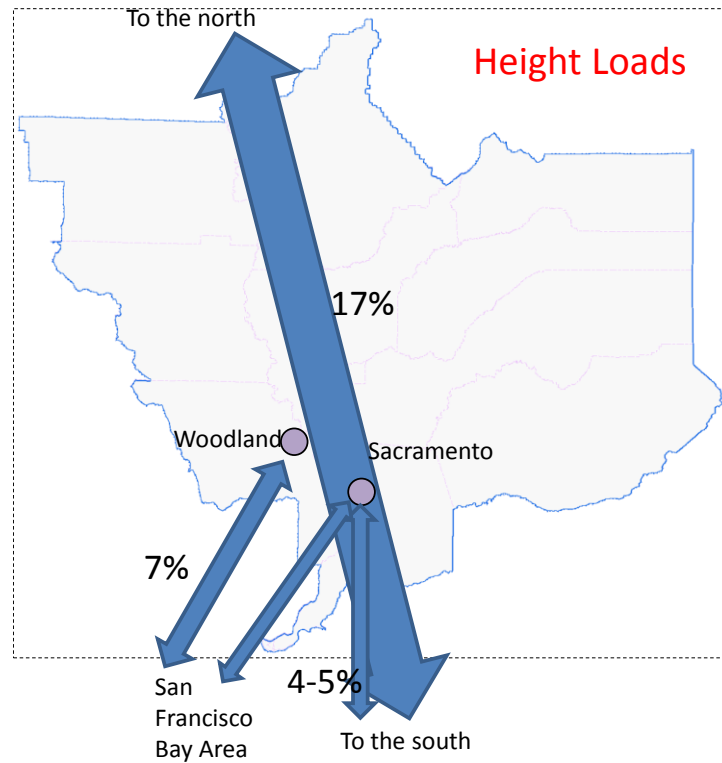
*Exhibit 2: District OD Pair Summary*

Origin-Destination Pair	NUMBER OF LOADS			PERCENT OF TOTAL LOADS IN DISTRICT 3		
	Total Permit Loads	Total Permit Loads >14ft	Total Weight Permit Loads	Total Permit Loads	Total Permit Loads >14ft	Total Weight Permit Loads
North-South Pass-Through Loads	3,731	1,144	1,355	25%	17%	18%
Woodland (Yolo Co) from/to Districts 4 or 5	638	445	283	4%	7%	4%
Sacramento from/to Locations South of District 3	589	322	342	4%	5%	5%
Sacramento from/to Districts 4 or 5	473	292	275	3%	4%	4%
East-West Pass-Through Loads	1,046	227	439	7%	3%	6%
West Sacramento from/to Districts 4 or 5	246	195	197	2%	3%	3%
Rancho Cordova from/to Districts 4 or 5	198	189	12	1%	3%	0%
West Sacramento from/to Locations South of District 3	157	100	112	1%	1%	2%
North-East Pass-Through Loads	613	97	437	4%	1%	6%
Woodland (Yolo Co) from/to Locations South of District 3	142	96	52	1%	1%	1%
Sacramento from/to West Sacramento	98	85	43	1%	1%	1%
Sacramento from/to Nevada	177	66	74	1%	1%	1%
Folsom from/to Districts 4 or 5	77	62	56	1%	1%	1%
All other District 3 Ods	6,504	3,381	3,711	44%	50%	50%
<b>Total Permit Loads</b>	<b>14,689</b>	<b>6,701</b>	<b>7,388</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Exhibit 3 shows these results for the highest major OD flows for the height permit loads, which was presented in the District 3 Goods Movement Study Final Report. Approximately 17 percent of all permit loads traveling in the District were between locations south and north of District 3. Approximately seven percent of all loads were between Woodland in Yolo County and destinations in the San Francisco Bay Area. Between four and five percent of all reported loads began or ended their trip in the Sacramento area and traveled either to the Bay Area locations or towards the south. The remaining over-height permit loads were to various other ODs in and through the District.

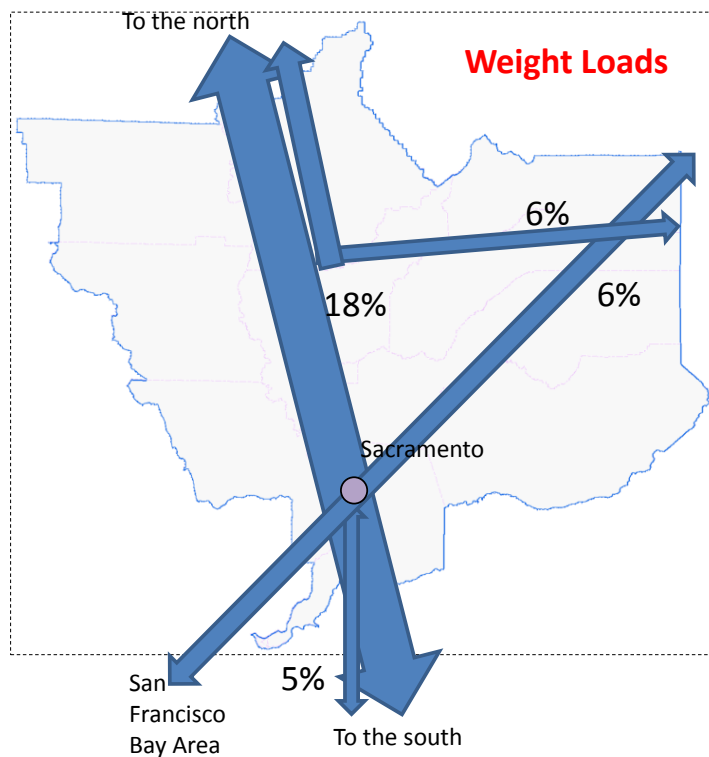
A similar pattern emerges when looking at over-weight permit loads in Exhibit 4. Around 18 percent of over-weight permits passed through the District between the south and the north. Another six percent traveled on an east-west axis between Nevada and the San Francisco Bay Area. Approximately six percent traveled between north District 3 and Nevada. The majority of these “north-east” loads were on US-395 along the far northeast corner of Sierra County between the Sierra Army Depot in Herlong, California (Lassen County) from/to destinations east of the California/Nevada State Line. Finally, around five percent of all loads were between Sacramento and destinations south. As with the over-height permit loads, the remaining weight loads were to various other ODs in and through the District.

Exhibit 3: Over-height permit Load (>14 Feet) Origins-Destinations 2013/14



Source: SMG analysis of Caltrans extralegal single-trip permit load database June 2013 to June 2014.

Exhibit 4: Over-weight Permit Load Origins-Destinations 2013/14



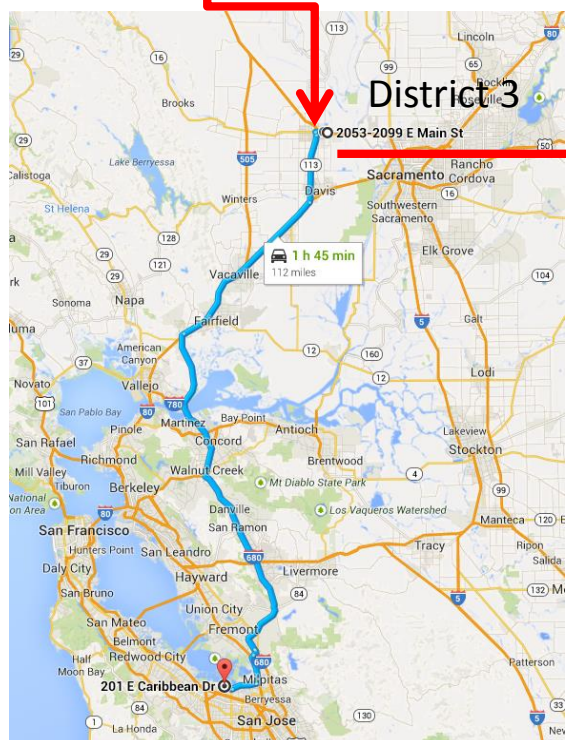
Source: SMG analysis of Caltrans extralegal single-trip permit load database June 2013 to June 2014.

## Identify Potential Routes

In the future, this task could potentially be performed using an all-or-nothing assignment in a travel demand model that has an appropriate traffic analysis zone structure. However, for this high-level analysis, potential routes at the county level were identified manually using Google Maps. This process is illustrated in Exhibit 5.

*Exhibit 5: Route Identification Process*

OD	Dist_OD	Number of Permit Loads	RTE1	RTE2	RTE3	RTE4
HERLONG-NEVADA @ HWY 395	2-NEVADA - NORTH	366	395-SIE			
WOODLAND-PALO ALTO	3-4	211	113-YOL	016-YOL		
WOODLAND-SUNNYVALE	3-4	125	113-YOL	016-YOL		
OREGON @ HWY 5-STOCKTON	OREGON-10	113	005-GLE	005-COL	005-YOL	005-SAC
WEST SACRAMENTO-PALO ALTO	3-4	88	050-YOL	080-YOL		
SACRAMENTO-SACRAMENTO	3-3	84	local routes			



The first step in this process was to sort the OD pairs in descending order to identify the most prominent OD pairs in the District as shown in the “Number of Permit Loads” column in Exhibit 2. The next step was to identify the state routes by county for each OD pair. Note that only routes were only identified for travel in District 3. For the example shown in Exhibit 5, the Woodland-Palo Alto OD was entered into Google Maps as shown in the exhibit. The routes taken were then manually entered into a spreadsheet. In this case, the first route taken from Woodland would be SR-16 in Yolo County, followed by SR-113, also in Yolo County. The routes taken in District 4 or other districts were not recorded (in this case I-80, I-680, SR-262, SR-237), and the sequence that the routes were entered was not important for the

analysis. Only the route and county were important for this high-level analysis since the purpose of the analysis was to identify bridges and other structures on the SHS that may be impacted by height or weight permit loads.

### Sum Permit Loads by Route

At this stage each trip between OD pairs has been assigned to one or more routes in the District. The next step is to total the permit loads for each route for both height and weight permit loads. The weight permit summary is fairly straightforward summation of total weight permit loads. The height permit loads were summarized at one inch intervals from 14 feet to 17 feet as illustrated in Exhibit 6.

The table in Exhibit 6 is referenced by the “Appendix B - Bridge List” worksheet in the “D3 GM Deficiency Analysis 2015-02-06.xlsx” workbook that is used to perform the deficiency analysis for the Goods Movement Study.

*Exhibit 6: Permit Loads Summarized by Route and County*

Number of Height Permit Loads at 1" intervals

Rte-Co      Total Weight and Height Permit Loads

Row Labels	Sum of Number of Permit Loads	Sum of Number of Weight Permit Loads	Sum of Number of Height Permit Loads	Sum of 14	Sum of 14.1	Sum of 14.2
0	88704	42656	42656	0	189	1344
005-COL	4332	1403	1403	0	12	70
005-GLE	4145	1333	1333	0	12	79
005-SAC	4854	1928	1928	0	20	75
005-YOL	4612	1626	1626	0	12	87
016-SAC	66	46	46	0	0	0
016-YOL	238	159	159	0	0	5
020-COL	142	71	71	0	0	1
020-NEV	172	36	36	0	2	5
020-PLA	4	3	3	0	0	0
020-SUT	167	71	71	0	2	4
020-YOL	1	0	0	0	0	0
020-YUB	251	86	86	0	2	6

### Link Permit Loads to Specific Bridges

The final step is to link the permit loads to individual structures. For a given structure, the objective is to total the number of permit loads that exceed the minimum height or maximum weight that can travel under (height) or over (weight) that structure. For example, if an overcrossing has a height of 14.5 feet the total number of trips with loads that exceed that height are to be summed with trips less than 14.5 feet being ignored.

This step is performed in the “Appendix B - Bridge List” worksheet in the “D3 GM Deficiency Analysis 2015-02-06.xlsx” workbook that is used to perform the deficiency analysis for the Goods Movement Study. Exhibit 7 is a sample from that workbook to illustrate how this step is performed.

Using the Microsoft Excel “vertical lookup” (VLOOKUP) function, the number of weight and height (at 1” intervals) is linked to the deficiency worksheet. The VLOOKUP references the “Rte-Co” and returns the total number of permit loads for that route and county from the previous analysis step. In the case of

weight permit loads, the total number is returned. This value is compared against the load rating for the bridge and a deficiency assessment is performed.

For height permit loads, the total number of permit loads that exceed the vertical clearance of the structure are summed, and the deficiency analysis performed.

A more detailed discussion of the methodology used to evaluate deficiencies for the Goods Movement Study can be found in the *District 3 Goods Movement Study: Prioritization Methodology* (September 2014).

*Exhibit 7: Permit Loads Assigned to Structures*

Structure Identification		Rte-Co		Structure Vertical Clearance/ Weight Permit Rating					Number of Height Permit Loads at 1" intervals Re												
Bridge Number	Structure Name	County	Route	Rte_Co	Postmile	Over/ Under	Vertical Clearance (ft)	Weight Permit Rating	2011 HDT	Number of Permit Loads > Bridge VC	Number of Weight Permit Loads	Immediate VC Detour Available	Bridge Vertical Clearance Priority Level	Bridge Permit Weight Priority Level	Distressed Bridge Priority Level						
24 4104	RAMP A4 - EB HWY 50 TO NB I-5	SAC	5	005-SAC	_022.50	U	17.06	PPPGG	12,142	0			No Deficiency	n/a-bridg over rte	No Deficiency	0	14	14.1	14.2	14.3	14.4
24 4104	RAMP A4 - EB HWY 50 TO NB I-5	SAC	5	005-SAC	_022.52	U	17.06	PPPGG	12,142	0			No Deficiency	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 4117	RAMP A17 - WB HWY 50 TO SB I-5	SAC	5	005-SAC	_022.53	U	15.32	OOOOO	12,142	403		No	High	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 4113	RAMP A13 - 5TH ST ONRAMP TO SB I-5 AND WB HWY 50	SAC	5	005-SAC	_022.53	U	15.68	OOOOO	12,142	223			Medium	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 0004R	SACRAMENTO RIVER VIADUCT	SAC	5	005-SAC	_022.57	U	15.55	PPGOO	12,142	247		No	Medium	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 0004L	SACRAMENTO RIVER VIADUCT	SAC	5	005-SAC	_022.57	U	17.49	PPGOO	12,142	0			No Deficiency	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 4102	RAMP A2 - EB 50 5TH STREET OFFRAMP	SAC	5	005-SAC	_022.58	U	16.44	POOOX	12,142	11			No Deficiency	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 0004L	SACRAMENTO RIVER VIADUCT	SAC	5	005-SAC	_022.58	U	17.49	PPGOO	12,142	0			No Deficiency	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 4113	RAMP A13 - 5TH ST ONRAMP TO SB I-5 AND WB HWY 50	SAC	5	005-SAC	_022.60	U	15.68	OOOOO	12,142	223			Medium	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 0274M	RIVERFRONT SEAL SLAB	SAC	5	005-SAC	_022.60	O	n/a	PPPPP	12,142		1,928		n/a-bridg under rte	No Deficiency	No Deficiency	0	20	75	84	151	
24 4101	RAMP A1 - 5TH STREET ONRAMP TO SB 5 & WB 50	SAC	5	005-SAC	_022.61	U	15.85	PPPPP	12,142	78			Lower	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 4113	RAMP A13 - 5TH ST ONRAMP TO SB I-5 AND WB HWY 50	SAC	5	005-SAC	_022.61	U	15.68	OOOOO	12,142	223			Medium	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 4117	RAMP A17 - WB HWY 50 TO SB I-5	SAC	5	005-SAC	_022.63	U	15.32	OOOOO	12,142	403		No	High	n/a-bridg over rte	No Deficiency	0	20	75	84	151	
24 4330	RAMP C30 - NB I-5 TO WB HWY 50	SAC	5	005-SAC	_022.63	U	16.31	GOOOX	12,142	12			Lower	n/a-bridg over rte	No Deficiency	0	20	75	84	151	

## Conclusion

This paper describes the high-level approach used to link permit loads from Caltrans Permit Branch statewide *Extra-Legal Single Permit Load Database* to specific structures on the SHS. Resource constraints for this project undertaken as part of the District 3 Goods Movement Study did not allow for a more in-depth assignment of permit loads using more sophisticated modeling tools. However, the general approach described can be adapted for more detailed analysis at a later date should this be desired by Caltrans.

This assessment resulted in the evaluation of 14,689 permit loads between 3,986 ODs that originate, end, or pass-through District 3. These loads were used to perform the vertical clearance and permit weight deficiency analysis as part of the District 3 Goods Movement Study.



# Appendix A – Legal Truck Lengths

<http://www.dot.ca.gov/hq/traffops/engineering/trucks/truckmap/truck-legend.pdf>

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=veh&group=35001-36000&file=35400-35414>

## TRUCK MAP LEGEND TRUCK LENGTHS & ROUTES

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION



Click here for the [Truck Network Map](#)

..... CALIFORNIA LEGAL ROUTES California Legal trucks (black trucks) can travel on STAA routes (green and blue routes), CA Legal routes (black routes), and Advisory routes (yellow routes). CA Legal trucks have access to the entire State highway system except where prohibited (some red routes).



### California Legal Truck Tractor - Semitrailer

Semitrailer length : no limit

KPRA\* : 40 feet maximum for two or more axles,  
38 feet maximum for single-axle trailers

Overall length : 65 feet maximum \*(KPRA = kingpin-to-rear-axle)



### California Legal Truck Tractor - Semitrailer - Trailer (Doubles)

#### Option A

Trailer length : 28 feet 6 inches maximum (each trailer)

Overall length : 75 feet maximum

#### Option B

Trailer length : one trailer 28 feet 6 inches maximum  
other trailer may be longer than 28 feet 6 inches

Overall length : 65 feet maximum



CA LEGAL ADVISORY ROUTES - CA Legal trucks only; however, **travel not advised** if KPRA length is over posted value. KPRA advisories range from 30 to 38 feet.

STAA ROUTES The STAA Network allows the "interstate" STAA trucks which are the green trucks shown below. The STAA Network consists of the National Network (green routes, primarily interstates) and Terminal Access routes (blue, primarily State routes). ("STAA" = federal Surface Transportation Assistance Act of 1982.)

(Click here for the [Truck Network Map](#).)



### Interstate "STAA" Truck Tractor - Semitrailer

Semitrailer length : 48 feet maximum

KPRA\* : no limit

Overall length : no limit \*(KPRA = kingpin-to-rear-axle)



Semitrailer length : over 48 feet up to 53 feet maximum

KPRA : 40 feet maximum for two or more axles,  
38 feet maximum for single-axle trailers

Overall length : no limit



### Interstate "STAA" Truck Tractor - Semitrailer - Trailer (Doubles)

Trailer length : 28 feet 6 inches maximum (each trailer)

Overall length : no limit



Terminal Access - Interstate "STAA" trucks may travel on State highways that exhibit this sign.



Service Access - Interstate "STAA" trucks may travel up to one road mile from the off ramp to obtain services (food, fuel, lodging, repairs), provided the route displays this sign.

..... SPECIAL RESTRICTIONS - Route restricted for vehicle length or weight, cargo type, or number of axles. Click here for the list of [Special Route Restrictions](#).

